**Geometry Quiz 16** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Objectives 9.4 – 9.7 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pr \_\_\_\_

***Directions:*** *Answer the following questions to the best of your ability. Show all your work on THIS quiz, and fill in the scantron bubble completely to indicate your answer.*

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| --- | --- |
| \_\_\_\_) If two angles of one triangle are congruent to two angles of another triangle, then the triangles are \_\_\_\_\_\_ .  A. equilateral  B. right triangles  C. equiangular  D. similar  E. regular  9.4 GC/PPF601 | \_\_\_\_) How are the triangles similar?    A. SSS  B. AA  C. SAS  D. AAS  E. ASA  9.4 GC/PPF601 |
| \_\_\_\_) Which of the three triangles are similar?    A. No triangles are similar  B. EFG and HJK are similar  C. EFG and LMN are similar  D. HJK and LMN are similar  E. EFG, HJK and LMN are similar  9.5 GC/PPF601 | |
| \_\_\_\_) Find the length of side x in the isosceles right triangle below.  x  12 ft.   1. 12√2 ft. 2. 6√2 ft. 3. 2√2 ft. 4. 24 ft. 5. 24√2 ft.   9.6 GC/PPF601 | \_\_\_\_) In a  triangle, how many times larger is the larger leg than the shorter leg?  A.  times larger  B. 2 times larger  C.  times larger  D.  times larger  E. Cannot be determined  9.7 GC/PPF601 |
| \_\_\_\_) You and your friend are standing next to one another outside. Your shadow is 23 inches long and your friend's shadow is 24 inches long. You are 5 feet 5 inches tall. Approximately how tall is your friend, rounded to the nearest tenth? *(note: 12 inches = 1 foot)*  A. 5.6 ft  B. 5.7 ft  C. 5.8 ft  D. 66.0 ft  E. 67.8 ft  9.5 GC/PPF601 | \_\_\_\_) Use the Angle-Angle Similarity Postulate to determine which pair of triangles is *not* similar.   |  |  | | --- | --- | | A. | B. | | C. | D. | | E. All triangles are similar | |   9.4 GC/PPF601 |
| \_\_\_\_) In the figure below,. Find the value of x that makes the triangles similar.    A.  B. 9  C.  D.  E.  9.5 GC/PPF601 | \_\_\_\_) Find the value of ‘A’ in the triangle shown below.    A. A=15  B. A=20  C. A=20  D**.** A=20  E. A = 15  9.7 GC/PPF601 |

|  |  |
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| \_\_\_\_) In order to estimate the height *h* of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree. What is the height *h* (in feet) of the pine tree?    A. 22 ft  B. 12 ft  C. 5.5 ft  D. 1.6 ft  E. None of the above  9.5 GC/PPF601 | |
| \_\_\_\_) Find the value of ‘Y’ in the triangle below.  A.  B.  C.  D.  E.  9.6 GC/PPF601 | \_\_\_\_) Which Similarity Theorem can be used to show ?    A. SSS  B. AA  C. SAS  D. AAS  E. ASA  9.4 GC/PPF601 |
| \_\_\_\_) Find x and y.    A. x = 6, y = 12  B. x = , y = 6  C. x = , y = 8  D. x = 12, y = 6  E. x = 6, y =  9.7 GC/PPF601 | \_\_\_\_) In a 45°-45°-90° triangle, the hypotenuse is \_\_\_\_\_\_ times as long as each leg.  A.  B.  C.  D.  E.  9.6 GC/PPF601 |
| \_\_\_\_) What is the value of x? Round your answer to the nearest tenth.    A. 3.5  B. 5.0  C. 6.4  D. 7.0  E. 7.1  9.6 GC/PPF601 | \_\_\_\_) Find the length of side *x* in the triangle below.  x  18 m  60°   1. 6 2. 6√3 3. 9 4. 9√2 5. √18   9.7 GC/PPF601 |

**Geometry Quiz 16** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FREE RESPONSE Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pr \_\_\_\_

1) What are the ratios of the sides lengths of a 45°-45°-90° triangle? Why? Draw a figure in the space below to support your explanation.

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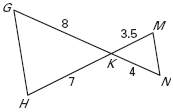
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2) Show that the triangles are similar by writing a similarity statement. *Explain* yourreasoning and use calculation to support your answer.



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